

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-12. (canceled)

13. (currently amended) A method for processing a biological sample for histological analysis, comprising the steps of:

- a) contacting the sample with a dehydrating agent;
- b) removing the dehydrating agent with a composition comprising a supercritical or a near supercritical fluid at a temperature in the range of 0.7 to 1.4 times its critical temperature and at a pressure in the range of 0.3 to 7 times its critical pressure; and
- c) replacing the supercritical fluid by infiltrating an embedding medium, ~~preferably paraffin,~~ at a pressure of at least 1 bar.

14. (previously presented) A method according to claim 13, wherein said supercritical or near supercritical fluid is carbon dioxide.

15. (currently amended) A method according to claim 13, wherein said biological sample is a fresh, frozen, or fixed, or non-fixed tissue sample, ~~preferably a fresh, non-fixed sample.~~

16. (previously presented) A method according to claim 13, wherein said biological sample comprises an organ or a part thereof.

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17. (previously presented) A method according to claim 13, wherein said sample is dehydrated, defatted and/or decalcified prior to impregnation by using a composition comprising a supercritical fluid.

18. (currently amended) A method according to claim 17, wherein said composition additionally comprises a dehydrating agent, ~~preferably an alcohol~~.

19. (previously presented) A method according to claim 17, wherein said composition additionally comprises a decalcifying agent, preferably an acid.

20. (previously presented) A processor for preparing at least one sample for histological analysis, comprising at least one process reactor for the at least one sample, characterized in that the processor comprises supplying means for supplying to the reactor at least one substance of which at least one is in supercritical phase or near supercritical phase and at least one supplying means for adding the embedding medium to the reactor through conduit and further comprises pressurizing and/or heating means for bringing a substance at the required pressure and/or temperature.

21. (currently amended) A processor ~~(4)~~ according to claim 20~~18~~, further comprising separating means ~~(14)~~ for separating substances from a mixture of substances leaving the reactor~~(9)~~.

22. (currently amended) A processor ~~(4)~~ according to claim 20~~18~~, further comprising recycling means ~~(13)~~ for recycling substances discharged from the reactor~~(9)~~.

23. (cancel)

24. (new) The method of claim 19, wherein the decalcifying agent is an acid.

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- 25. (new) The method of claim 13, wherein the embedding medium is paraffin.
- 26. (new) The method of claim 15, wherein the biological specimen is a fresh, non-fixed sample.
- 27. (new) The method of claim 18, wherein the dehydrating agent is an alcohol.